PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of Ron Carmel, et al.

Serial No.:

09/675,811

Examiner:

Fred O. Ferris III

Confirmation No.:

1164

Art Unit:

2128

RECEIVED

Filed:

September 29, 2000

SEP 2 4 2004

For:

Technology Center 2100 SYSTEM, METHOD AND DATA STRUCTURE FOR SIMULATED

INTERACTION WITH GRAPHICAL OBJECTS

U.S. Patent and Trademark Office 220 20th Street S. Customer Window, Mail Stop Amendment Crystal Plaza Two, Lobby, Room 1B03 Arlington, VA 22202

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Enclosed is an Information Disclosure Statement and accompanying Form PTO/SB/08A for the above-identified patent application.

- In accordance with 37 C.F.R. §1.97(b), no additional fee for submission of the IDS is required.
- In accordance with 37 C.F.R. §1.97(c), also enclosed is: [x]
 - the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p); or [x]
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The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283.

By:

Dated: September 20, 2004

Cooley Godward LLP ATTN: Patent Group One Freedom Square Reston Town Center 11951 Freedom Drive Reston, VA 20190-5656

Tel: (703) 456-8000 Fax: (703) 456-8100

218260 v1/RE 4_#S01!.DOC Respectfully submitted, COOLEY GODWARD LLP

Philip W. Marsh Reg. No. 46,061

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INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97(c)

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98.

- Pursuant to 37 C.F.R. §1.98, an electronic copy of each document cited in [x]the attached Form PTO/SB/08A is provided on the enclosed CD-ROM.
- []No copies of the publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No. ___ to which the above-identified application claims priority under 35 U.S.C. §120.
- No copies of any U.S. patents or U.S. patent application publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98 because this application was filed after June 30, 2003.

[]	Publication(s) listed on the	attached Form	PTO/SB/08	A were cited in a	1
	foreign searc	h or examination	report correspon	nding to	application	
	serial no	and mailed on	_•			

[]	of the	M.P.E.F	copy of a non-English publication(s) Pursuant to §609 P., Applicant submits the attached foreign search or eport, which cites such non-English language publication(s).				
	publica	ation	ed is a copy of a non-English publication(s) English language tion (copy enclosed) claims priority from this non-English tion.				
[]			explanation of non-English publication(s) for which an ation is not available.				
[]			English translation of non-English publication(s) cited Form PTO/SB/08A.				
[]	Enclos	sed is a	copy of pending patent Application Serial No				
			closure Statement is filed after the period specified in 37 he mailing of:				
	[x]	a final	action under 37 C.F.R. §1.113;				
	[]	a notic	e of allowance under 37 C.F.R. §1.311; or				
	[]	an acti	on that otherwise closes prosecution in this application.				
In acco	ordance	with 37	7 C.F.R. §1.97(c) also enclosed is:				
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		0	No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, having made a reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing				
	[] [] This Ir § 1.97(of the examination of the examin	of the M.P.E.F. examination recommendation recommendation. [] Enclosed is an English translation. [] Enclosed is an English translation of the attached is an in the attached is a final formation of the commendation of the co				

It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form PTO/SB/08A to the undersigned.

Dated: September 20, 2004

Cooley Godward LLP ATTN: Patent Group One Freedom Square Reston Town Center 11951 Freedom Drive Reston, VA 20190-5656

Tel: (703) 456-8000 Fax: (703) 456-8100

218261 v1/RE 4_#T01!.DOC Respectfully submitted, COOLEY GODWARD LLP

By:

Philip W. Marsh Reg. No. 46,061

PTO/SB/08A (10-01)

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agerypply, Refluction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Substitute for form 1449A/PTO Complete if Known

Application Number 09/675,811 INFORMATION DISCLOSURE **Filing Date** September 29, 2000 STATEMENT BY APPLICANT **First Named Inventor** Ron Carmel Art Unit 2128 (use as many sheets as necessary) **Examiner Name** Fred O. Ferris III **Technology Center 2100** Sheet 1 of 13 IMMR056/00US Attorney Docket Number

			U.S. PATENT DOC	UMENTS		
Examiner Cite No.1		Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Wher Relevant Passages or Releva Figures Appear	
		6,422,941	7/23/2002	Thorner et al.		
		6,160,489	12/12/2000	Perry et al.		
		6,111,577	8/29/2000	Zilles et al.		
		5,690,582	11/25/1997	Ulrich et al.		
		5,575,761	11/19/1996	Hajianpour		
		5,437,607	8/1/1995	Taylor		
		5,436,622	7/25/1995	Gutman et al.		
		5,283,970	2/8/1994	Aigner		
		5,186,695	2/16/1993	Mangseth et al.		
		5,175,459	12/29/1992	Danial et al.		
		5,165,897	11/24/1992	Johnson		
		5,022,384	6/11/1991	Freels		
		4,885,565	12/5/1989	Embach		
		4,484,191	11/20/1984	Vavra		
		4,464,117	8/7/1984	Foerst		
		4,333,070	6/1/1982	Barnes		
		4,262,549	4/21/1981	Schwellenbach		
		4,127,752	11/28/1978	Lowthorp		
		2,972,140,	2/14/1961	Hirsch		

	Foreign Patent Document				Name of Patentee or	Pages, Columns, Lines,
Cite No. ¹	Country Code ³	Number ⁴ Kind Code ⁵ (if known)		Publication Date MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear
	JP	H2-185278		7/19/1990	Taito Corporation	
	JP	H4-8381		1/13/1992	Epoch Co. and Key- Planning Co.	
	JP	H7-24147		1/27/1995	Sega Corporation	
	JP	H5-192449		8/3/1993	Taito Corporation	
	No.¹	Country Code ³ JP JP JP	Country Code ³ Number	Country Code ³ Kind Code ⁴ (if known)	No.¹ Country Code³ Number⁴ Kind Code⁵ (if known) MM-DD-YYYY JP H2-185278 7/19/1990 JP H4-8381 1/13/1992 JP H7-24147 1/27/1995	No.¹ Number ⁴ Kind Code ⁵ (if known) MM-DD-YYYY Applicant of Cited Document JP H2-185278 7/19/1990 Taito Corporation JP H4-8381 1/13/1992 Epoch Co. and Key-Planning Co. JP H7-24147 1/27/1995 Sega Corporation

Examiner Signature	Date Considered	

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PTO/SB/08A (10-01)

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Substitu	te for form 1449A/P	то			Complete if Known	
				Application Number	09/675,811	
INFO	ORMATION	1 DIS	SCLOSURE	Filing Date	September 29, 2000	DEOE
STA	TEMENT E	BY A	PPLICANT	First Named Inventor	Ron Carmel	RECEIVED
				Art Unit	2128	
	(use as many sh	neets as	s necessary)	Examiner Name	Fred O. Ferris III	SEP 2 4 2004
Sheet	2	of	3	Attorney Docket Number	IMMR056/00US	Technology Center 210

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS					
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
		PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990.					
		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," Bachelor of Science Thesis, MIT, May 1983, archived June 23, 1983.					
		WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report 1230</i> , Naval Ocean Systems Center, San Diego, July 1988.					
		BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970.					
		JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," Armstrong Aerospace Medical Research Laboratory, AAMRL-TR-90-039, August, 1990.					
		KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," PRESENCE, 4(4):387-402, Harvard Univ., 1995.					
		AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.					
		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," DSC-Vol. 55-1, <i>Dynamic Systems and Control</i> : Volume 1, ASME 1994.					
		GOBEL et al., "Tactile Feedback Applied to Computer Mice," International Journal of Human-Computer Interaction, Vol. 7, No. 1, pp. 1-24, 1995.					
		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 nd Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.					
		"Cyberman Technical Specification," Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide, 4/5/1994.					
		OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95, Seoul, Korea, 21-24 August 1995.					
		KACZMAREK et al., "Tactile Displays," Virtual Environment Technologies, Chap. 9, pp. 349-414.					
		LAKE, "Cyberman from Logitech," at http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html, 1994.					
		"Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).					

Examiner	Date	
Signature	Considered	

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Substitute for form 1449A/PTO				Complete if Known			
				Application Number	09/675,811		
INFO	DRMAT	ION DIS	CLOSURE	Filing Date	September 29, 2000	DECEMEN	
STA	STATEMENT BY APPLICANT		First Named Inventor	Ron Carmel	RECEIVED		
				Art Unit	2128	2014	
	(use as ma	ny sheets as	necessary)	Examiner Name	Fred O. Ferris III	SEP 2 4 2004	
Sheet	3	of	3	Attorney Docket Number	IMMR056/00US	Technology Center 210	

	OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS						
Examiner Initials * Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. "Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages).							
		SCANNELL, "Taking a Joystick Ride," Computer Currents, Boston Edition, Vol. 9, No. 11, November 1994					
		YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems, Raleigh, NC, July 7-10, 1992					
		NOLL, "Man-Machine Tactile," SID Journal, July/August 1972 Issue.					
		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," Ph.D. Dissertation, Stanford University, June 1994.					
		ZILLES, "A Constraint-Based God-Object Method for Haptic Display," Department of Mechanical Engineering, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, undated.					

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